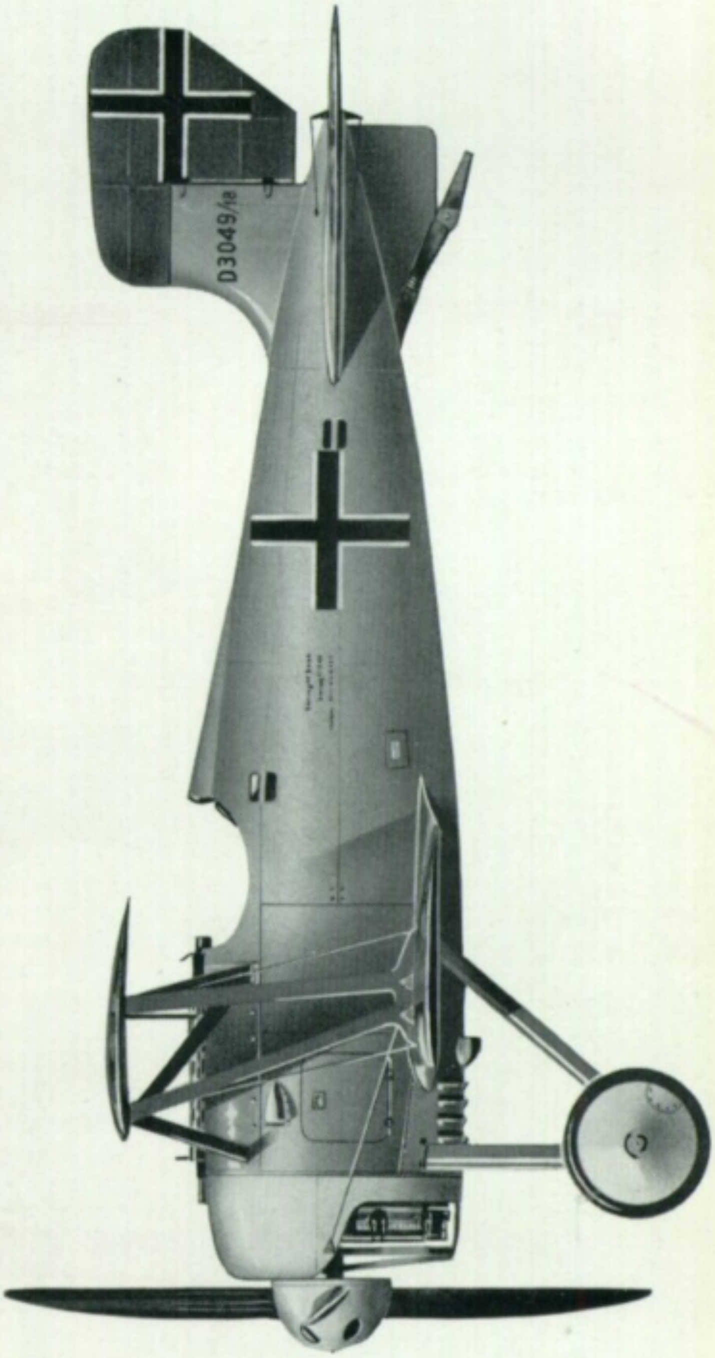
PROFILE PUBLICATIONS

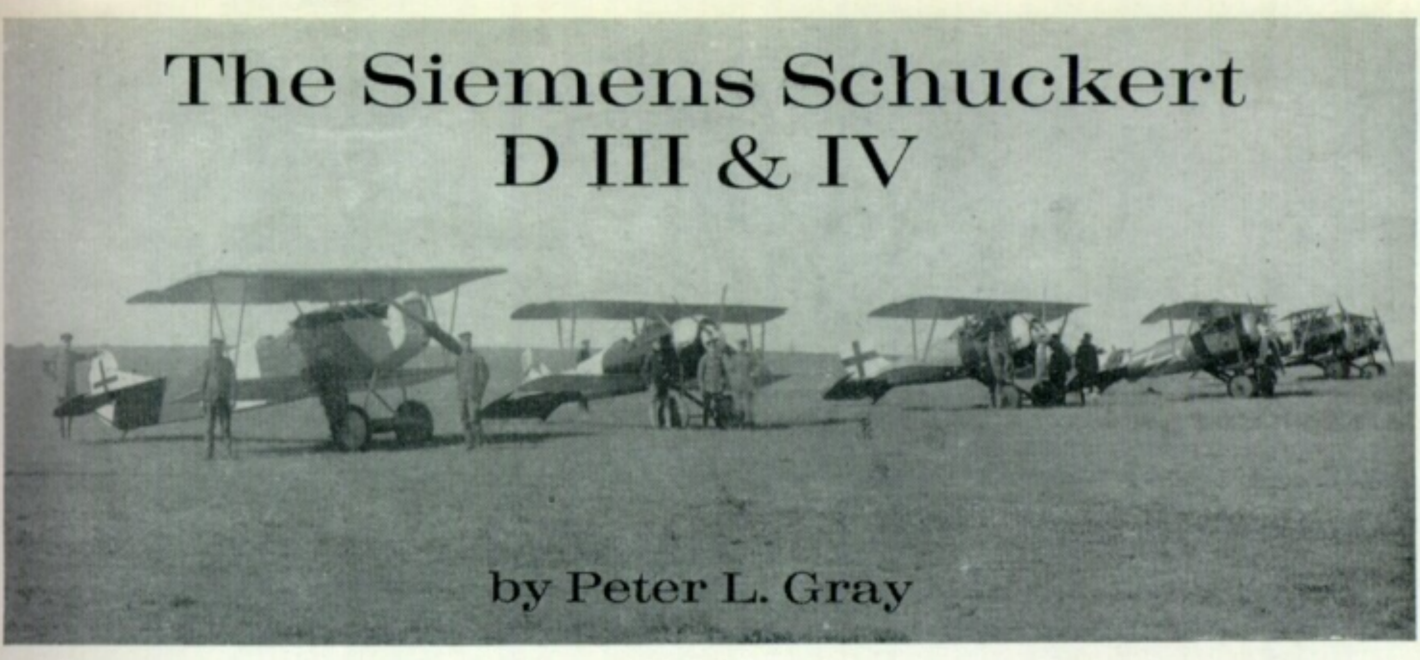
The Siemens Schuckert D III & IV



NUMBER 86
TWO SHILLINGS

The Siemens Schuckert D III & IV

by Peter L. Gray



Rare line-up shot of Jasta *12 in so far as more than one S.S.W. aircraft is depicted.* Left to right: *Fokker D VII, S.S.W. D IV, S.S.W. D IIIs.* (Photo: Alex Imrie)

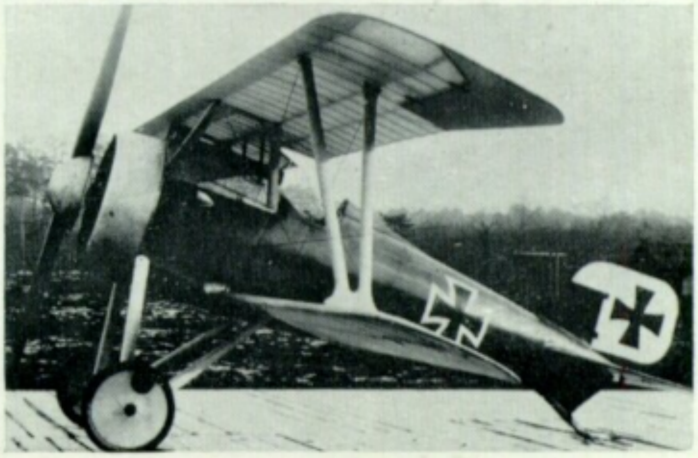
It was a world of apparent peace. A trio of de Havilland bombing machines clawed their way through the tenuous layer of cloud endeavouring to gain every inch of altitude on this warm morning during the fifth September of the war. Wrapped in the limited visibility of the cloud no signs of hostility existed; no Archie (Flak) barred their easterly flight path; the bitterly contested, war-torn landscape was shrouded from their eyes. They were not deceived into a false sense of security however; every faculty remained alert. Even if the German army was in retreat their air service was still a force to be reckoned with, especially the fighters. The *Jagdstaffeln*, although on restricted fuel supplies, had some excellent fighting aircraft in the new B.M.W.-engined Fokker D VIIs and were in good heart. It was rumoured, too, there were even still better fighters coming into service in the shape of cantilever parasol monoplanes and short, stocky biplanes, powered with huge eleven-cylinder rotary engines, both types being possessed of extreme agility.

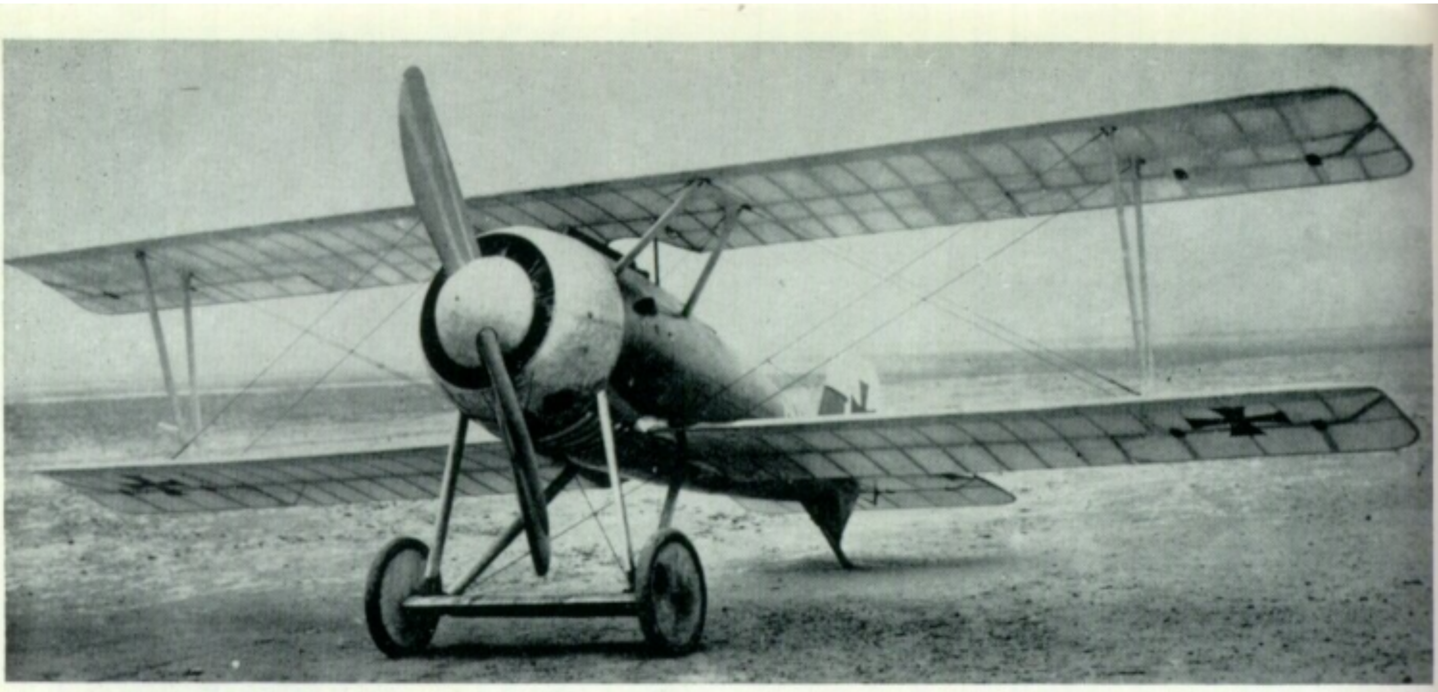
Soon there was an increased brightness in the air and in a moment the three bombers had broken through the cloud layer. Saturated in condensation from the cloud they glistened in the brilliance of the early morning sun which glared angrily at their hostile intrusion from the depths of the German Fatherland. As the bombers closed their formation in the now improved visibility, tracers suddenly stabbed with extreme accuracy into the leading machine—a diminutive barrel of a fighter had hurtled up out of the eye of the sun pouring a deadly hail from its twin Spandau machine guns. The de Havilland appeared to stagger: smoke belched from its nose as it slid off, crab-like, to starboard at an ever steepening angle.

Quickly the German fighter pulled up into an impressive Immelmann turn and came roaring back on the right-hand bomber, oblivious to the hail of bullets now vengefully directed at it. Once more the synchronised Spandau guns spoke and an unfortunate gunner collapsed to the floor of his cockpit. Clearly here was an artist; undoubtedly a crack pilot from one of the nearby Marine *Jagdstaffeln*, and flying one of the new rotary-engined biplanes to achieve all this speed and agility at such an altitude. With alacrity the two Allied pilots pushed forward their sticks, eagerly seeking the protective layer of cloud from which they had so recently emerged, while an ominous column of black smoke marked the course of their less fortunate comrades. Certainly this proved to be the case. The machine was one of the new Siemens Schuckert D IVs, several of which had been allocated to the Marine *Jastas*, on an early morning sortie.

Development of the machine had begun almost a year and a half before when the Siemens Schuckert Werke had built three airframes in which to test their new 160-h.p. eleven-cylinder rotary engine, built by the founder Siemens Halske establishment. Originally, Siemens Halske started in 1847, manufacturing telegraphic equipment; it was not until 1873 that the Siemens Schuckert title was adopted on merging with the Nürnberg Schuckert works to form the huge electrical combine. In 1907 the firm made their first entry into the aeronautical sphere when the German General Staff requested the construction of a non-rigid military airship. Between 1909 and 1911 three monoplanes were built, after which aircraft manufacture ceased until 1914 when, due to the urgent need for aeroplanes by the German military forces, the aircraft department was re-opened. It was now directed by Dr. Walter Reichel with Dr. Hugo Natalis, Messrs Forssman, Wolff and the Steffen brothers—Bruno and Franz—as leading assistants.

S.S.W. D IIc D 7551/17. *The long wing span prototype aircraft. First flew in October 1917.* (Photo: P. M. Grosz)





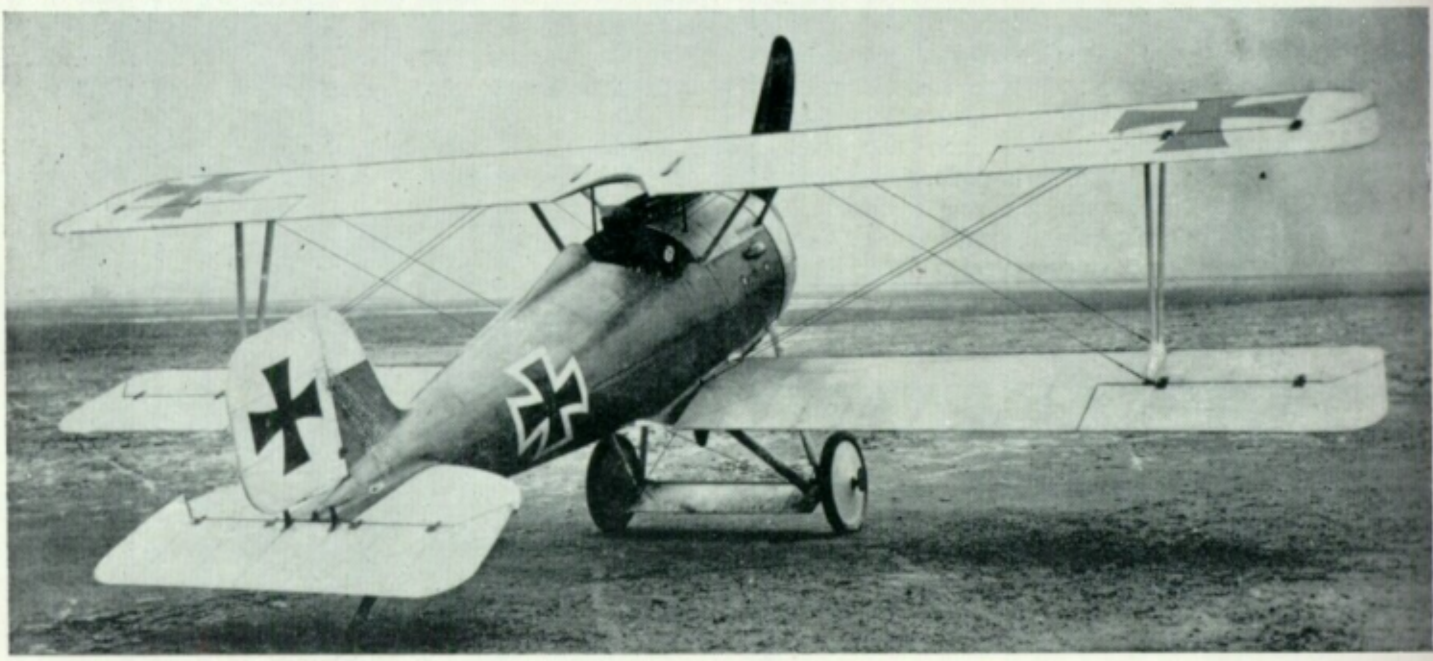
Further view of D 7551/17 *after some modification to cowling. Note retention of* "U" *centre-section struts indicates modification not to full D III standard. First flew in this form 20th December 1917.*

Giant R type *(Riesenflugzeug)* multi - engined machines were designed and built initially and Siemens Schuckert did not enter into the fighter category until 1916, when a few E I and E III monoplanes (much like the Fokker product) were constructed, but which were already obsolescent. About this time several captured French Nieuports were made available to the Albatros, Euler and S.S.W. firms with the idea that the best characteristics of the type be incorporated into a German design as a quick means of obtaining a possibly superior machine. The eventual Siemens production was almost a carbon copy of the Nieuport 17, the only visible differences being in the engine installation, the spinnered propeller and the tailskid. This type was designated D I and accepted for production on 25th November 1916 when 150 machines were ordered. Completed airframes were held up due to slow production of the Siemens Halske engines, and a subsequent order in March 1917 for another hundred aircraft was cancelled, as it was found that by mid-1917 its performance was not up to the standard then required.

A NEW ENGINE

Engineers at the Siemens-Halske works of the combine had designed a radical eleven-cylinder, geared rotary engine based on the experience gained with their smaller nine-cylinder engine. In normal rotary engines the crankshaft was a stationary component around which the crankcase and cylinders revolved at some 1,200 to 1,500 r.p.m. In the Siemens engine the crankshaft revolved in one direction at 900 r.p.m. while the crankcase and cylinders rotated in the opposite direction, also at 900 r.p.m. This achieved a virtual engine speed of some 1,800 for an airscrew speed of only 900 r.p.m.; the obvious main advantage was in increased airscrew efficiency, there were, however, disadvantages in the system. Being a bigger and more powerful engine than its 110-h.p. forebear, the 160-h.p. S.H. III (as it was designated) tended to run a lot hotter and this effect was accentuated by the slow speed at which the cylinders rotated, with consequent reduction in the amount of air cooling obtained. These conditions were further aggravated by the lack

From this three-quarter rear view of D 7551/17 *it will be seen that the tailplane shape differed from eventual production aircraft.*

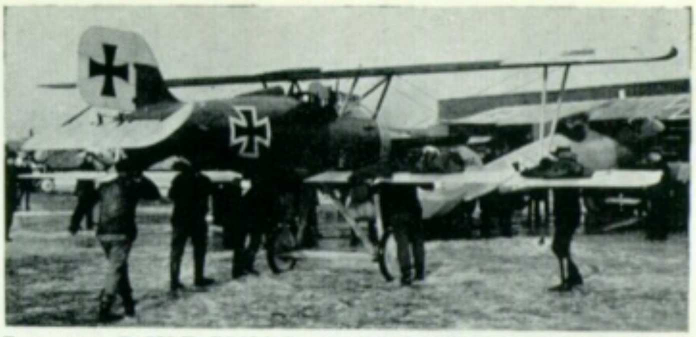


of a good grade of castor oil (the universal lubricant for rotary engines) available to the Germans, with the result that there occurred a degree of piston seizure after only several hours running. The most encouraging feature of the engine was that, due to the high compression ratio, it maintained its power at very high altitude and for this reason its development was continued. The engine was fitted with twin magnetos and speed was governed by a proper throttle control, sensitive down to about 350 r.p.m. This was a considerable advance over most rotaries of the period which ran flat out and were only partially controlled by a "blip switch" which cut the spark altogether for as long as depressed, or by a control which cut the spark to certain cylinders, which system (in the Gnôme Monos) had a serious attendant fire hazard. Another advantage in the Siemens engine, over standard rotaries, was that a considerable degree of reciprocation was achieved in the opposite rotation of the cylinder and crankshaft masses which accordingly reduced the gyroscopic forces.

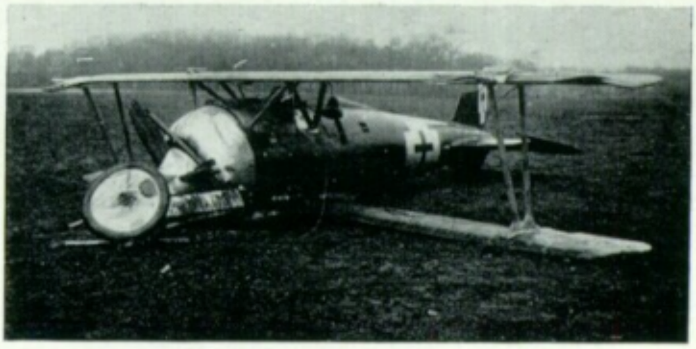
A NEW FIGHTER

To take advantage of this powerful 160-h.p. engine a more original and advanced fighter was conceived in the Siemens Schuckert drawing office. Most of the original design work came from Dipl. Ing. Harald Wolff—who had been appointed chief designer after the death of Ing. Steffen—ably assisted by his deputy, Dipl. Ing. Glöckner and a somewhat younger engineer named Hauck.

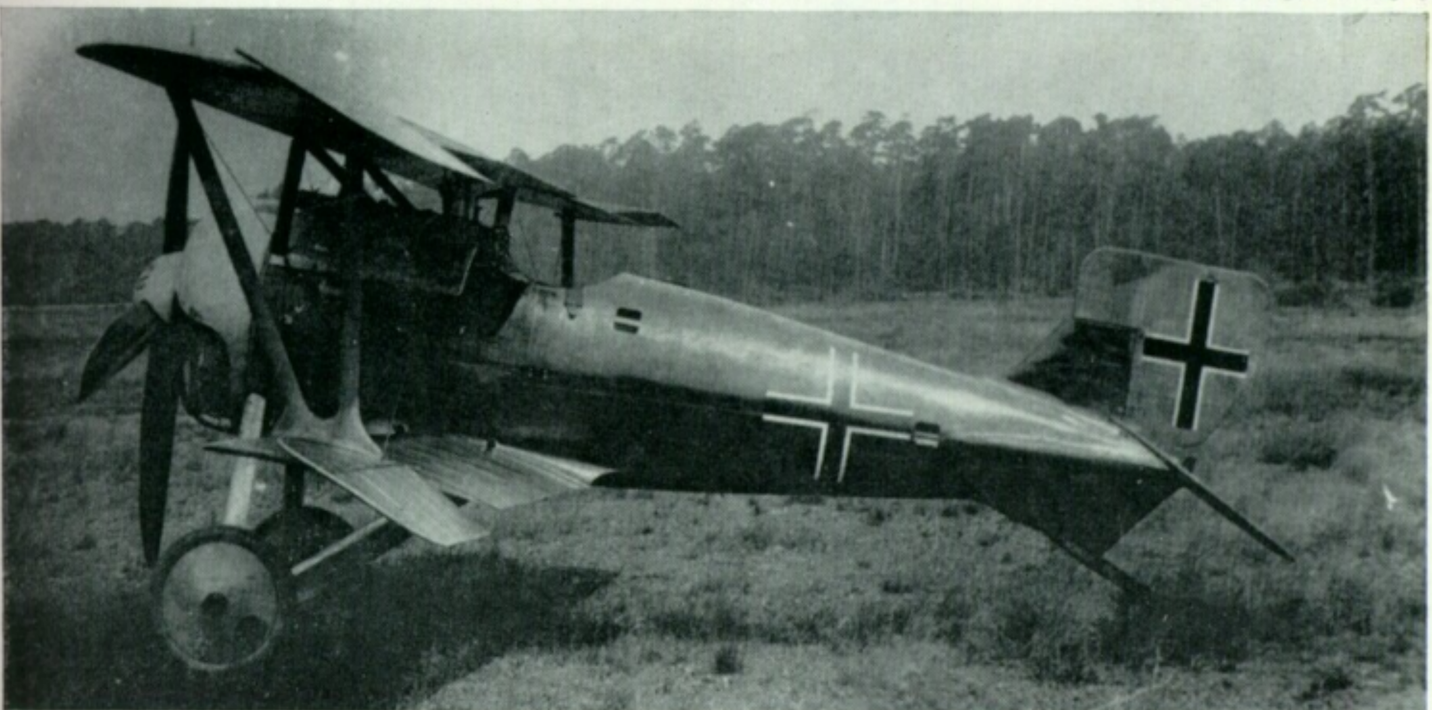
Three pre-production airframes were built during the spring of 1917 and designated D II (*D 3501/16*), D IIa (*D 3500/16*) and D IIb (*D 3502/16*), the intention being that they would serve mainly as flying test-beds for the S-H III engine. However, due to teething troubles no engines reached the Siemens Schuckert works until June of that year, with consequent delay in flight testing. When the completed prototypes did appear they were seen to be small, stocky, barrel-like machines of extremely aggressive demeanour and the test programme was implemented forthwith. A spectacular performance was achieved with the D IIb during August when 5,000 m. (16,400 ft.) was attained in 15½ minutes and 7,000 m. (22,965 ft.) in 35½ minutes, the result of which ensured an order for three more development aircraft. These were designated D IIc short (*D 7550/17 kurz*), D IIc long (*D 7551/17 lang*) and D IIe (*D 7553/17*) but the order was subject to the proviso that an improvement in the level speed should be attained over the initial three prototypes which, although able to climb like lifts were not notoriously fast when flying straight and level. On completion of the second three prototypes during October 1917 they were re-designated D III and within a few weeks a pre-production order for twenty aircraft was placed, followed by a further order for thirty more in February 1918.



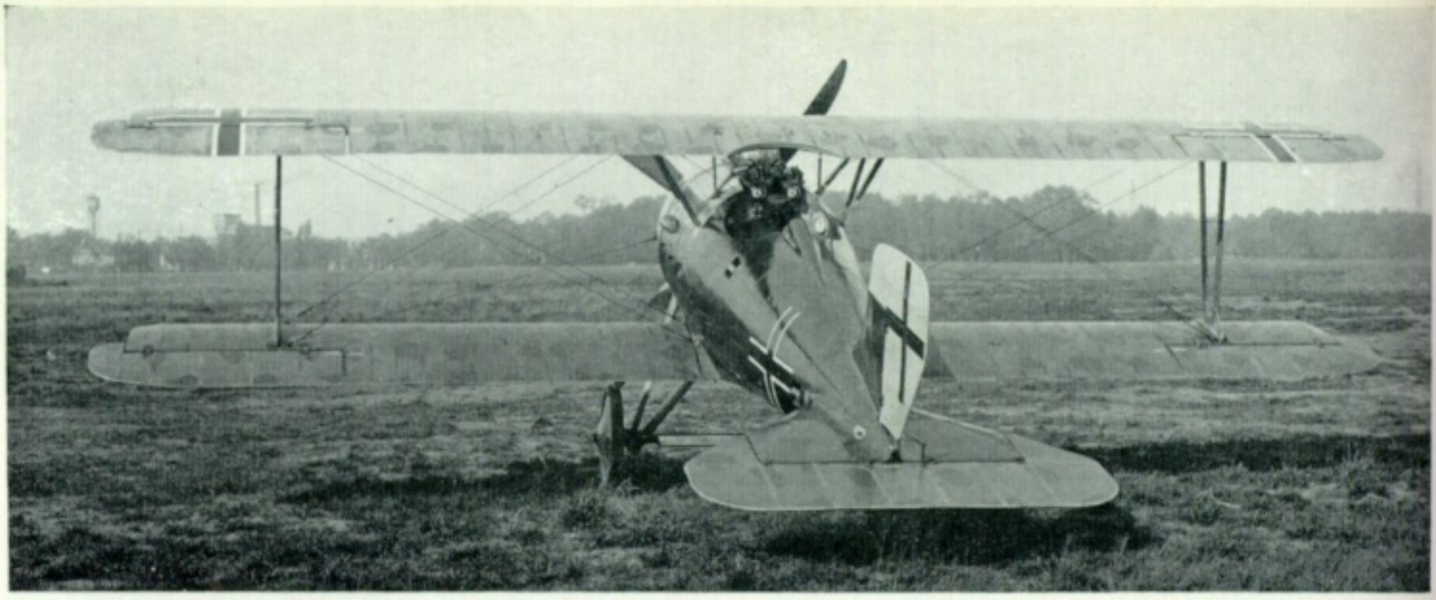
Prototype D III D 7552/17 *at Adlershof D Types competition in January 1918.* (Photo: Alex Imrie)



D IV prototype D 7554/17. *This was originally* D 7551/17 *airframe which crashed at Adlershof in January 1918 and was rebuilt to D IV standards. Machine was yet again rebuilt after above crash with shorter span wings; it was re-designated D IVa.* (Photo: Egon Krueger)



S.S.W. D III D 1620/18, *aircraft is of second production series batch.* (Photo: Egon Krueger)



Stubby proportions of D IV are accentuated in this three-quarter rear view of D 3082/18. (Photo: Egon Krueger)

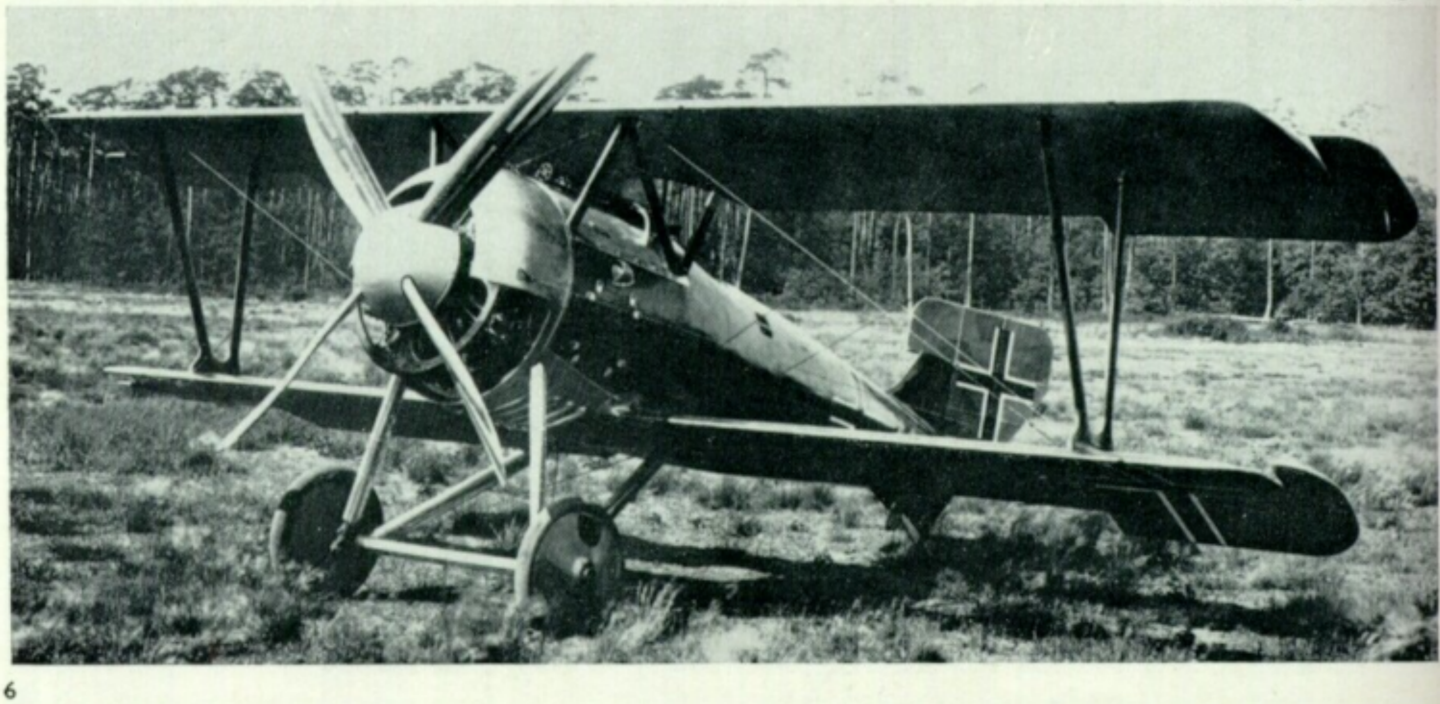
The two D IIc machines differed in wing arrangement, *7550/17* was built with a span of 8·5 m. (27 ft. 10¾ in.) and an area of 19·4 sq. m. (209 sq. ft.); *7551/17* spanned 9·0 m. (29 ft. 6⅜ in.) but with reduced chord on the upper wing the area grossed only 18·02 sq. m. (195 sq. ft.). This airframe was subsequently modified to become the first D IV production prototype. The D IIe, *7553/17*, was built with wings based on dural girder spars, which it was hoped would enable the interplane bracing cables to be dispensed with. "I" struts were the main distinguishing feature from the other prototypes. In the event it was found on air test that the wings were not rigid enough and flexed considerably. Bracing cables were then added but as this completely negatived the original intention this machine was ultimately rebuilt to D IV standards and sent to the Front for operational assessment with *Jagdgeschwader* II in the spring of 1918. Later it was returned to the S.S.W. factory for further modification and a new engine, after which it was once more ferried back to operational service in July.

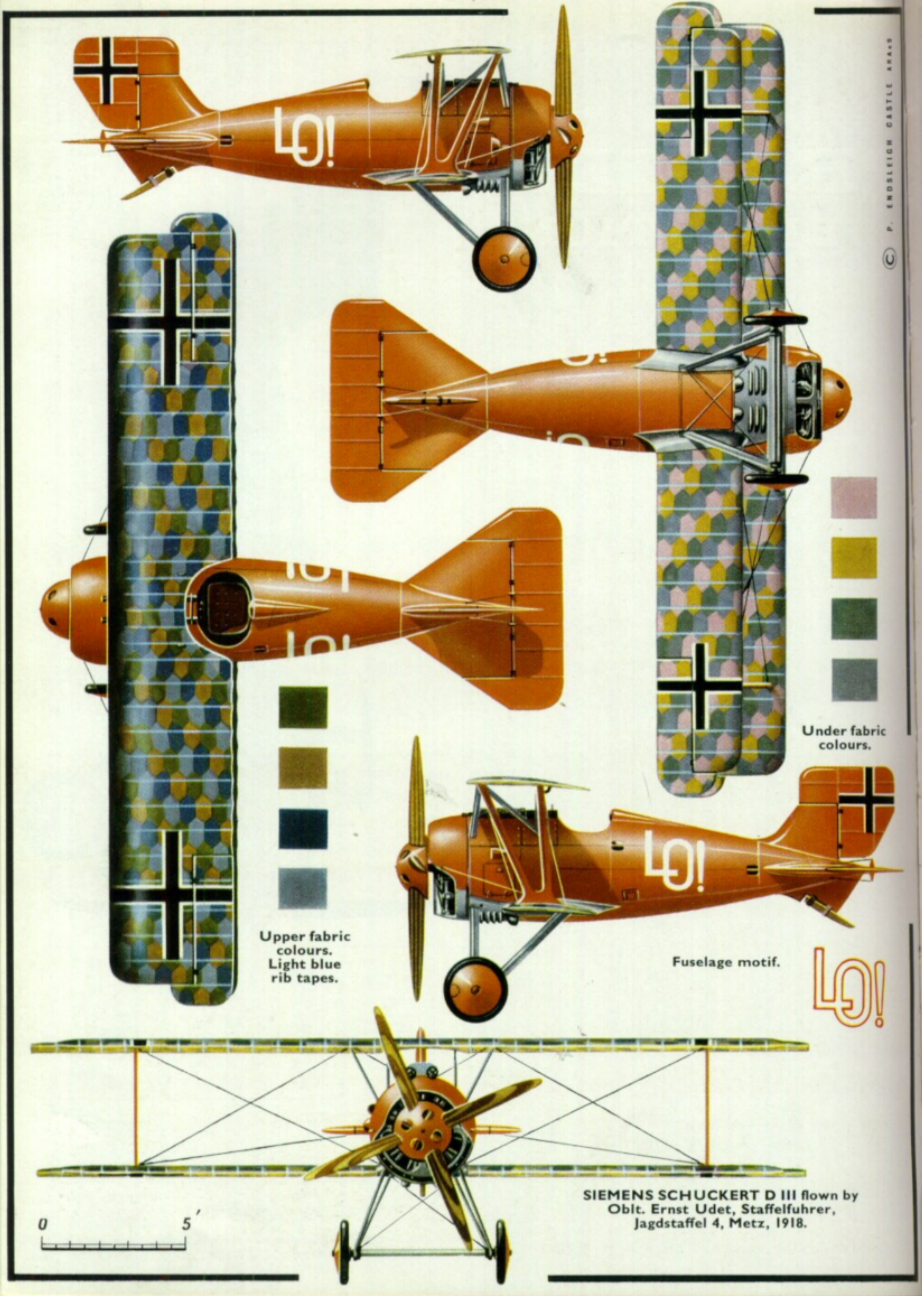
Deliveries of the first production batch of D IIIs commenced during January 1918 and the airframes differed from the two prototypes in being equipped with four-blade airscrews of reduced diameter which enabled a shorter undercarriage chassis to be fitted. Under construction at the same time were further development machines which had been ordered, i.e. three D IVs and three D Vs. The latter were little more than a two-bay version of the D IVs and as no improvement in performance was obtained the D V was not proceeded with.

OPERATIONAL TRIALS

Forty-one of the first fifty production D IIIs were sent to JG II on the Western Front during April and May for operational trials. Mostly they were channelled to *Jasta* 12 and *Jasta* 15, which units pilots were most appreciative of their new mounts and acclaimed its combination of sensitivity with good flying qualities and rocket-like climb. These aircraft were fitted with the completely circular cowling, and although victories in combat were coming, over-heating and consequent seizure of the Siemens Halske engines began to occur with disconcerting frequency. The engine had not been sufficiently developed yet for operational usage and opponents of the rotary-engined fighter were quick in their endeavour to discredit the D III. However, an extremely objective report on the type was prepared by Hauptmann

An aircraft of the third production batch; D III D 3008/18. *Note at this stage spinner was not punched with cooling louvres.*
(Photo: Egon Krueger)




LO!
Upper fabric colours. Light blue rib tapes.
Under fabric colours.
Fuselage motif.
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SIEMENS SCHUCKERT D III flown by Oblt. Ernst Udet, Staffelfuhrer, Jagdstaffel 4, Metz, 1918.

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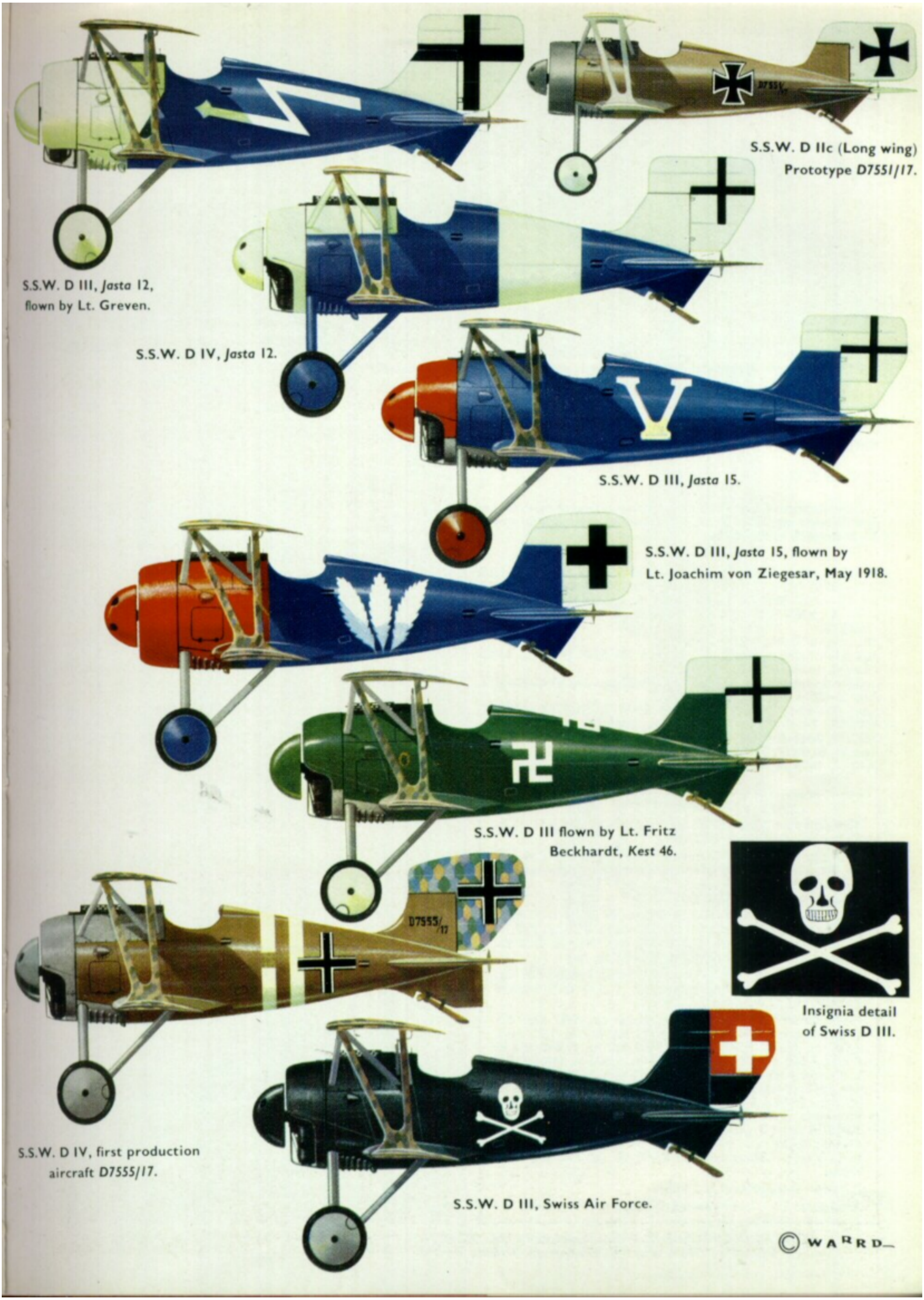


S.S.W. D III, *Jasta* 12, flown by Lt. Greven.

S.S.W. D IIc (Long wing) Prototype *D7551/17.*

S.S.W. D IV, *Jasta* 12.

S.S.W. D III, *Jasta* 15.

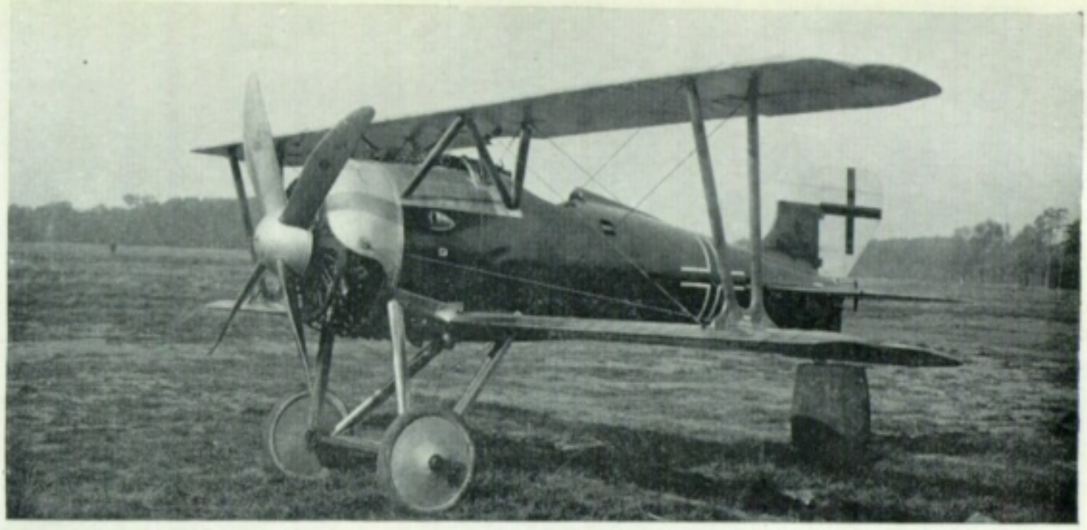
S.S.W. D III, *Jasta* 15, flown by Lt. Joachim von Ziegesar, May 1918.

S.S.W. D III flown by Lt. Fritz Beckhardt, *Kest* 46.

Insignia detail of Swiss D III.

S.S.W. D IV, first production aircraft *D7555/17.*

S.S.W. D III, Swiss Air Force.



S.S.W. D IV "ex works". Note bright metal panels and lozenge-fabric-covered wings and wheel discs. (Photo: Egon Krueger)

Rudolph Berthold, in Command of JG II, who listed both the defects and the advantages of the D III and put forward constructive opinion for improvement. He concluded:

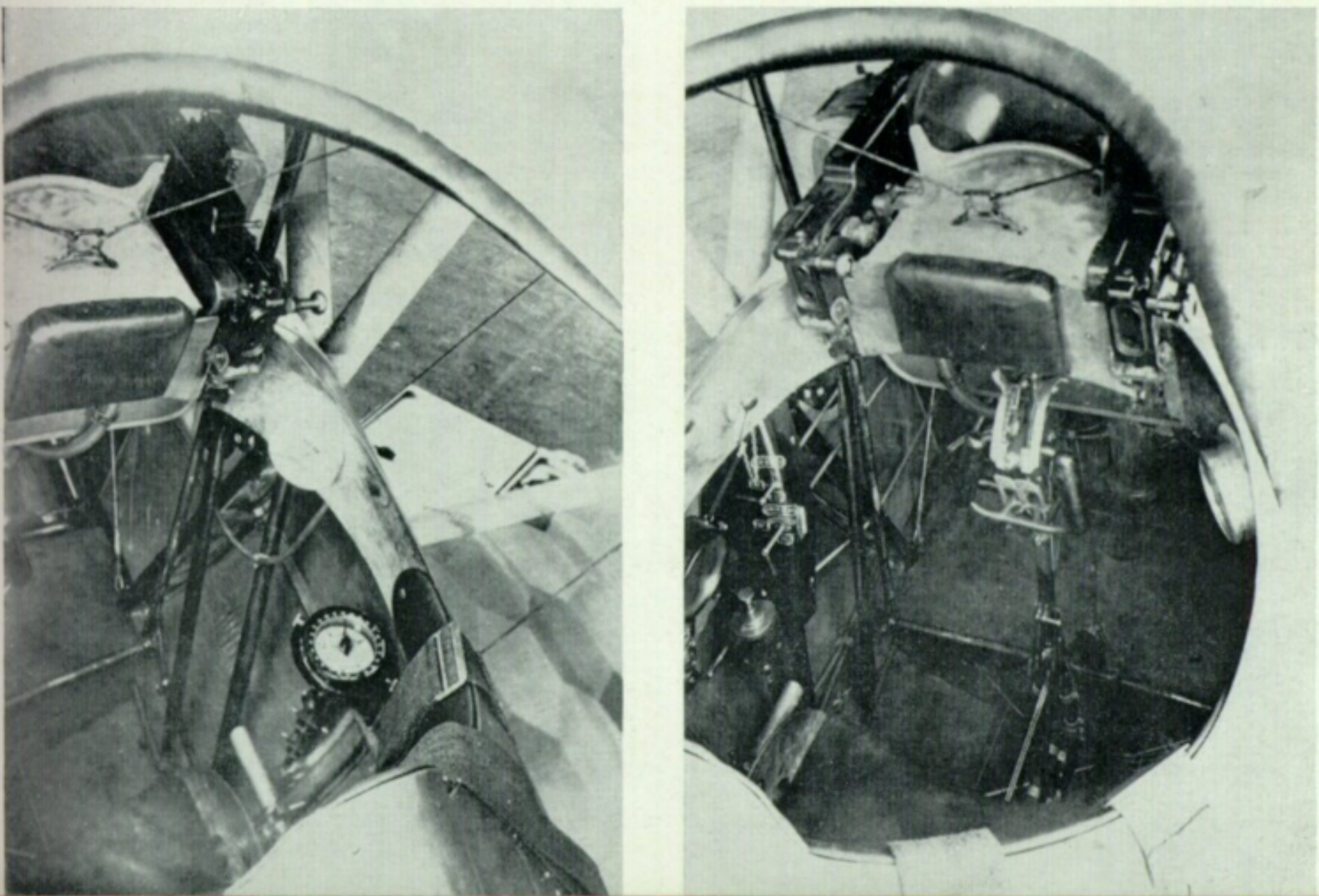
> "It is an urgent requirement that this fighter be made available for Front Line use as soon as possible, for, after rectification of its present faults, it could become one of the most useful fighters."

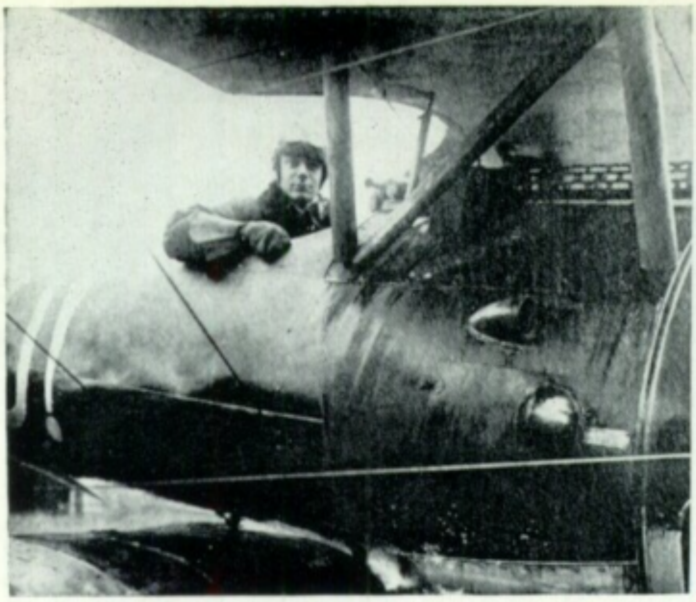
The result of this report was that the operational D IIIs were returned to the Siemens Schuckert factory towards the end of May for the installation of improved engines and airframe modification. Incorporation of these improvements was also applied to a third production batch of thirty D IIIs which were on the production line at this time. Most visibly apparent modification was the cutting away of the lower part of the cowling in an attempt to achieve a greater degree of cooling; there was also some alteration to the vertical tail surface profile. These D III aircraft were then returned to operational service later in the year and were used mainly for home defence by *Kestas* (*Kampfeinsitzer-Staffel*) 2, 4b, 5, 6, and 8 over Western Germany, in which a considerable degree of success was achieved.

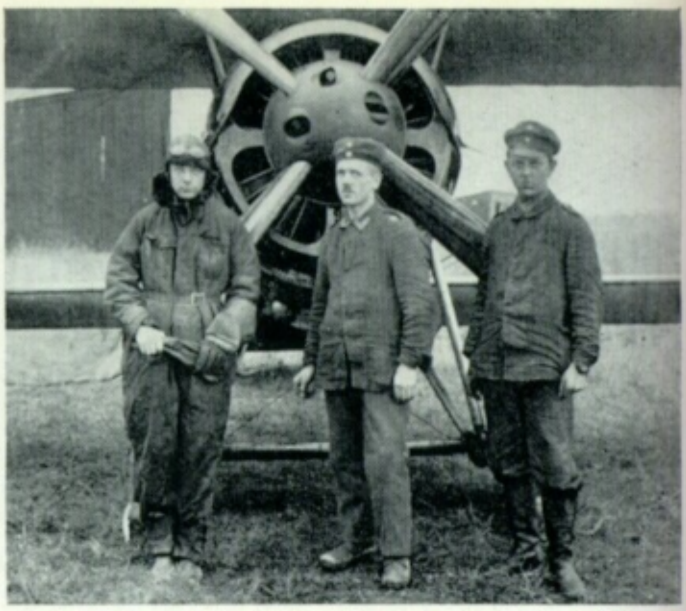
THE D IV

Meanwhile, after the abandonment of the two-bay D V, all efforts were concentrated on the D IV. A youthful recruit to the S.S.W. design staff, Heinrich Kann, had produced a new wing layout in which the chord and area of the upper wing was considerably reduced. In fact both upper and lower wings were now identical in shape and of no more than one metre chord. Flight tests were encouraging and showed improvement over the D III; maximum speed at 118 m.p.h. showed slight superiority while climb to 6,000 m. (19,685 ft.) in sixteen to seventeen minutes was something akin to spectacular. A production order for the type was placed in March 1918 but it appears the D IV did not become operational until August when the first deliveries were made to *Jastas*

Right and left side of S.S.W. D III cockpit. (Photos: Egon Krueger)







Left: *Obltn. Ernst Udet in his S.S.W. D III with "LO!" motif at Metz 1918.* Right: *Udet with mechanics in front of his red-fuselaged D III. Note cooling louvres, clearly shown in this shot.* (Photos: Alex Imrie)

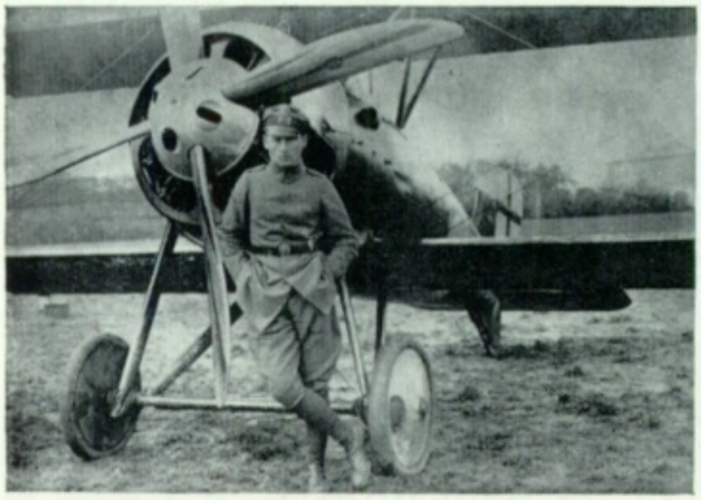
14 and 22 and to *Marine Luft Feld Jasta*. More were supplied during September and by the end of that month about half-a-dozen *Jastas* had a few of the type on charge. Although eventual production orders totalled 280 machines delivery was comparatively slow and it is fairly certain that no more than about fifty of the type ever saw active service. On 5th October JG I (Richthofen) requested twelve D IVs, to be followed by a further twelve as soon as possible, but it does not seem that they were ever received by this unit.

"A SUPERIOR FIGHTER"

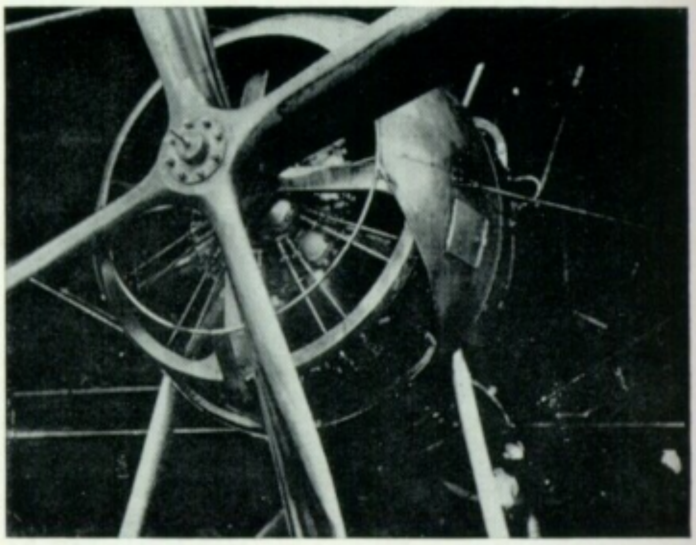
The first D IV to be received by *Jasta* 22 was used by *Staffelführer*, Lt. Lenz: it had been brought in by Lt. Rath who had previously served with *Jasta* 22 before going to Siemens as a works pilot. On 3rd October Lenz reported at length on the D IV and concluded:

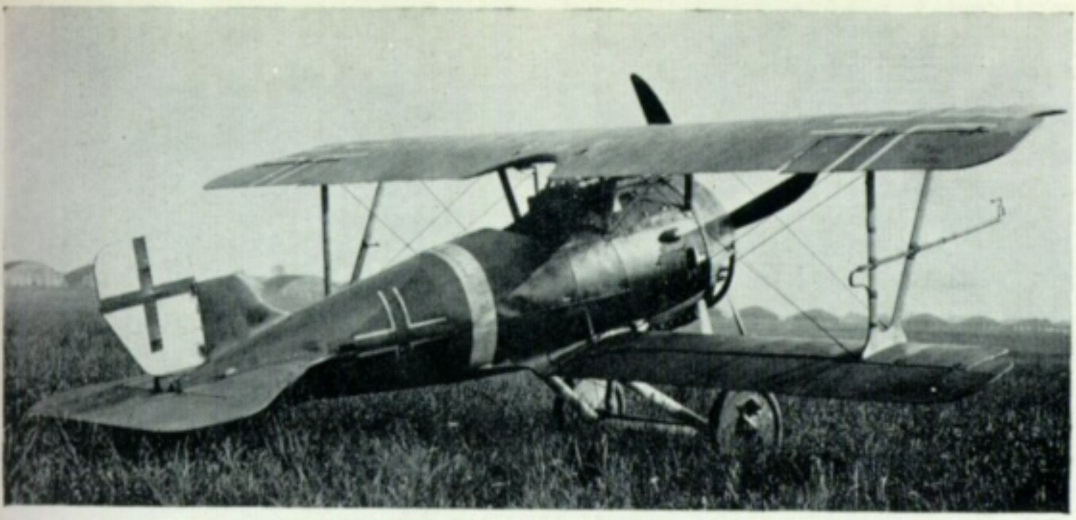
> "The S.S.W. D IV is without any doubt superior by far to all single-seaters in use at the Front today. This superiority is shown in its climbing and turning ability and particularly in maximum level speeds at altitudes above 4,000 m. Formation flying with the Mercedes Fokker D VII is for this reason impossible, but on the other hand it seems appropriate that a low-flying Fokker section should work with a S.S.W. section flying above it. In this way their superiority can be used to the full and they are still in a position to protect the Fokkers below.
>
> "On 29th September during an operational flight Lt. Lenz reached a height of 6,000 m. in 14½ minutes. The period of climb was confirmed by the aircraft clock and altimeter; the latter was later checked and found to be correct. The flight was carried out with full war load. (If it should be thought that this extraordinary performance was carried out by a specially high-powered motor, it has since been surpassed by other S.S.W. aircraft of the *Staffel*.) In this same sortie a British reconnaissance machine flying at 6,200 m. was easily out-climbed and brought down, and the S.E.5. protecting it was shot down during a climbing turn.
>
> "The S.S.W. D IV is an aeroplane which probably gives of its best for only a short period which must be borne in mind during operations. Systematic expenditure of this period by flying when there is low cloud cover, for example, is not the best way of making use of the machine. If skilfully managed it should not be over-taxed. High-flying enemy formations seen approaching from the airfield can be climbed up to and brought down.
>
> "In order to obtain full command of the aircraft, especially for pilots who are unused to rotary motors, a certain number of flights round the airfield are essential. Practically speaking, only advanced pilots should be employed on the Siemens, as its landing speed at first seems considerable. A great advantage is its very short take-off run of only about 60 m. The action of the double ailerons is generally stiffer than experienced with the Fokker D VII; however, the effects are satisfactorily limited. A further adjustment is not recommended lest the feel of the machine suffers."

Ltn. Franz of Marine Land Feld Jasta *with S.S.W. D IV.* (Photo: Egon Krueger)

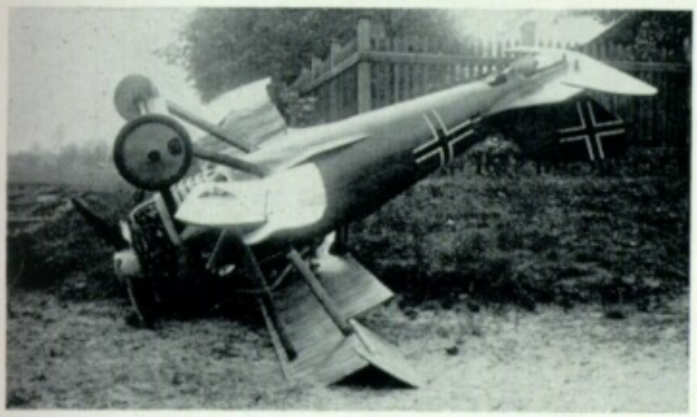


Nose detail of D III shows initial degree of cowling cut away. (Photo: Egon Krueger)





Note this S.S.W. D III in Allied hands does not have headrest. Attachment to "V" struts is probably a yaw meter. (Photo: Imperial War Museum)



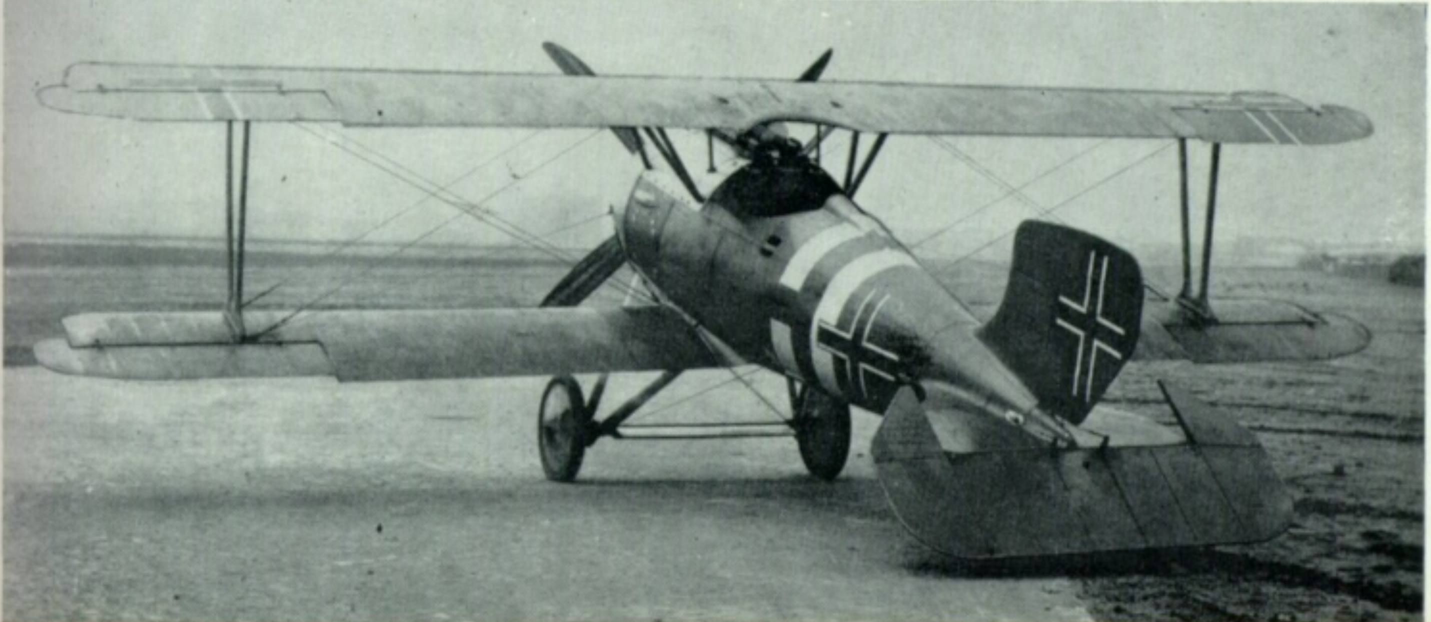
Confirmation of D IV's wayward characteristics when landing. D 3049/18 *overturned by Ltn. Speer.* (Photo: Egon Krueger)

Without exception all who flew the Siemens Schuckert D IV enthused over its fantastic climbing ability but it was an aircraft which was somewhat tricky to land. This difficulty was one of the problems with the D IV, it had to be very precisely landed in a tail down, wheel on, attitude; any attempt to three-point usually resulted in turning upside down. When Siemens machines were handed over to the Allies at Nivelles, after the Armistice, the first three Allied pilots to fly them turned them over on landing and further flying of the type was restricted until an investigation had been carried out. Lt. Greven of *Jasta* 12 stated that the machine had a peculiar oscillation in flight that made aiming difficult, but this may not have been a general characteristic. In a combat report dated 24th October 1918 Major Keith "Grid" Caldwell, C.O. 74 Sqdn. R.A.F. commented that the S.S.W. D IV was very manœuvrable and that although their speed was less than an S.E.5a (which 74 Sqdn. were flying) their climb was very much better and that they were very handy dog-fighting machines. At the second competition for single-seat fighters held at Adlershof in the summer of 1918, Anthony Fokker specially requested to be allowed to fly his parasol monoplane (later to be known as the E V/D VIII) in mock combat against the S.S.W. D IV but even his undoubted skill was not enough to beat the manœuvrability of the Siemens aircraft.

CONSTRUCTION DETAILS

In construction the D III and D IV were fairly conventional. At first a completely circular cowling housed the geared rotary engine which was supported by a front spider mount; later the bottom segment was cut away to afford greater cooling. Eventually the lower half was cut away right up to the centre line. A large, near hemi-spherical, spinner enclosed the coarse pitch four-blade airscrew: on late D III and D IVs this was punched with four louvres between the blade roots to scoop more cooling air on to the crankcase. The fuselage was of circular section throughout, built on four main longerons with transverse bulkheads connected by diagonal formers, to which framework the three-ply covering was pinned, resulting in an extremely rigid structure. Fin and tailplane were built integral with the fuselage and likewise ply-skinned, the fin being asymmetrical in section to counteract torque. The generously horn-

The first true production D IV D 7555/17. (Photo: Alex Imrie)



Ltn. Lenz, Staffelführer, *Jasta 22, staunch advocate of the D IV, photographed with his aircraft.* (Photo: Alex Imrie)

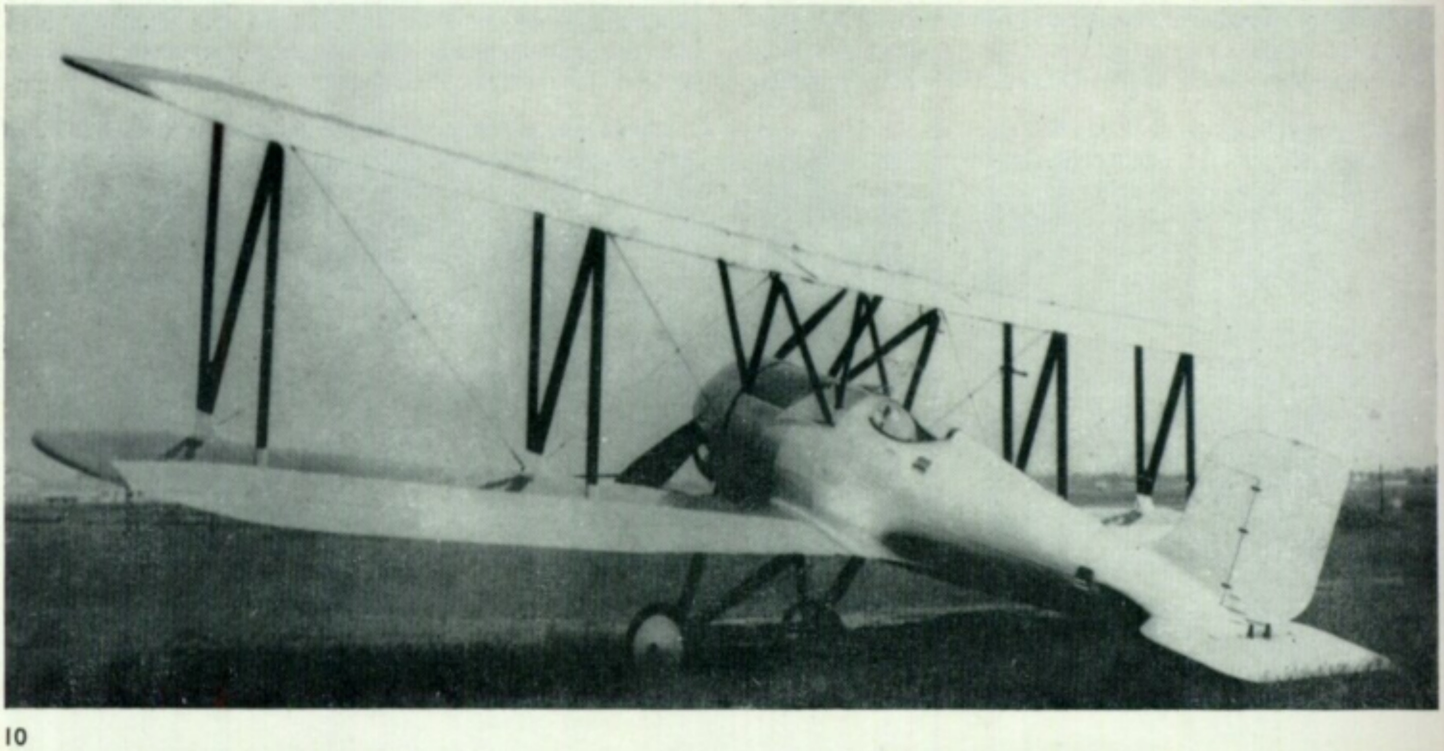
balanced rudder and one-piece elevator were of steel tube framing with thin steel sheet ribs and fabric covering.

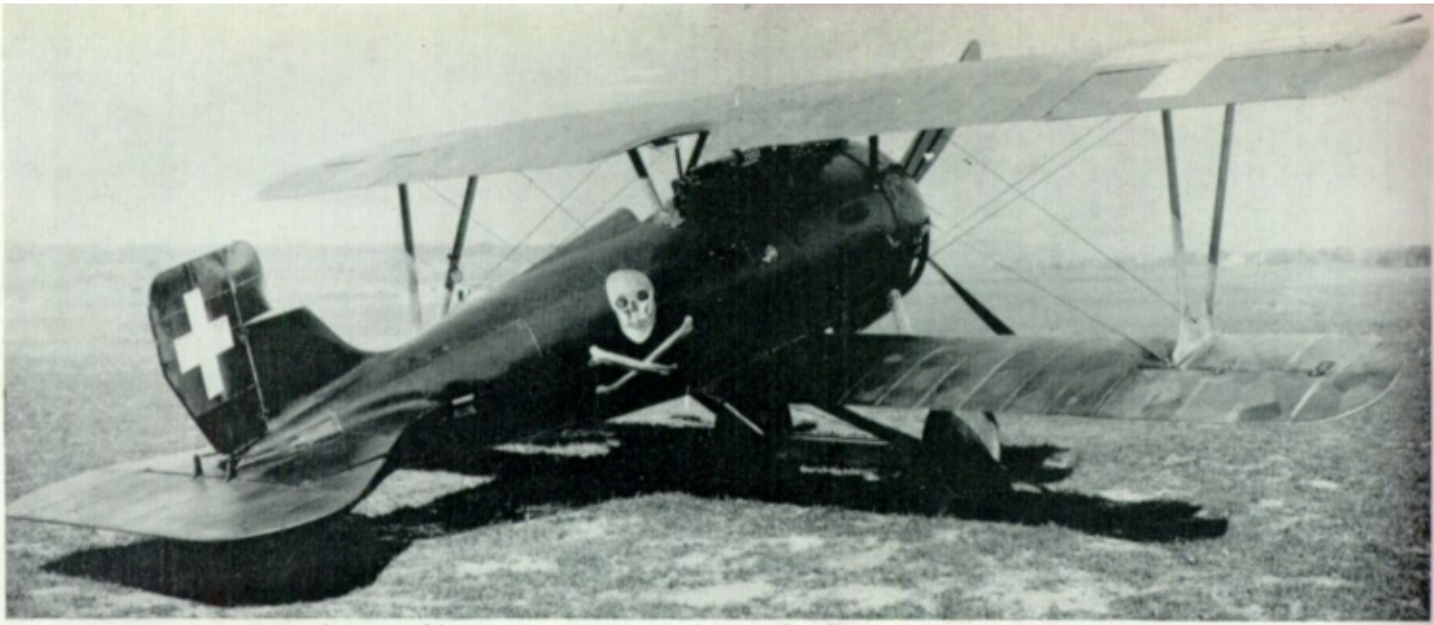
Although differing in chord, structurally the wings of the D III and D IV were of similar pattern. They were based on two box spars which were spindled out to the required thickness except at strut and compression member locations where they were left solid. All wing spar fittings were designed to go round the spars to avoid weakness attendant on piercing. Ribs were of 1·5 mm. three-ply with pine cap strips and were secured in place with glued wooden blocks. The upper wing was a one-piece structure, the lower in port and starboard panels. Overhung, horn-balanced ailerons, of steel tube framework, were located at all four wing tips and were actuated by torque tubes running through the wings. Centre-section struts of "N" format, springing from the upper longerons, secured the upper wing while the lower panels were attached direct to securing points on the lower longerons, the joint being neatly faired into the fuselage. The "V" pattern interplane struts were fashioned from spruce, hollowed for lightness and fabric-wrapped for strength and to obviate splintering. The wing cellule was diagonally braced with stranded steel cables while a drag wire ran from the cowling to the lower interplane strut junction. An interesting, and unusual feature of the D IV wing cellule was that the port side was some four inches longer than the starboard to offset the considerable torque.

An orthodox "V" type undercarriage chassis was fitted. The main struts were of circular section steel tube and were faired over with sheet aluminium to give a streamline section. The structure was held together with a steel tube spreader bar behind the axle and diagonally cable braced in the plane of the rear struts. The axle was secured to the apices of the "V" struts by steel coil spring shock absorbers. A strong ash tailskin was secured to an integrally-built, ply-covered, under-fin—of triangular shape in the D III but of increased area and with a right angle trailing edge in the D IV.

A singular circumstance pertaining to the S.S.W. D IV was that, unaccountably, production did not cease with the Armistice but continued until about mid-1919. Eventually the majority of the airframes were destroyed in accordance with the terms of the

The last—and much modified—D IV. Used for high-altitude research by Albatros firm. Destroyed in Berlin Museum during W.W.I air raid. (Photo: Egon Krueger)





S.S.W. D III with skull motif, interned by Swiss authorities and marked with their own National Insignia.
(Photo: P. M. Grosz via Alex Imrie)

Treaty although one D IV was retained at Adlershof and existed—albeit much modified by Albatros—until 1926.

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The assistance of Alex Imrie on the colour reference material and Egon Krueger and Peter Grosz, who loaned so much helpful material, is sincerely appreciated.

Serial Number batches: Protos—3500–3502/16, 7550–7555/17.
D III—8340–8359/17, 1600–1629/18, 3007–3026/18, 3037–3046/18.
D IV—3027–3036/18, 3047–3056/18, 3060–3096/18, 6150–6184/18, 9000–9015/18, 9017–9020/18, 9022–9029/18, 11500–11502/18.
Allocation of D IIIs, where known:
Jagdgeschwader II (Js 12, 13, 15 and 19) 8346–8359/17, 1600–1608/18, 1610–1619/18, 1624/18.
Jagdgeschwader III (Js 2 (Boelcke), 26, 27 and 36) 8340–8345/17.
Kest 2—3015–3017/18, 3019–3020/18.
Kest 4b—8342/17, 8346/17, 8348–8349/17, 8351/17, 8357/17, 1604/18, 1611–12/18, 1626–1628/18, 3009/18, 3013/18, 3021–3022/18, 3043–3044/18, 3046/18.
Kest 5—8344/17, 8353/17, 8355–8356/17, 8358–8359/17. 1607/18, 1618/18, 1620/18, 1623/18, 1625/18, 3040/18.
Kest 6—8347/17, 1600–1602/18, 1619/18, 3037/18, 3041/18, 3045/18.
Kest 8—8345/17, 8354/17, 1605–1606/18, 3007–3008/18, 3010/18, 3012/18,
Z.A.K. 3—1609/18.
Jastaschule I—3018/18, 3038/18.
Marine Landflieger Abt.—3039/18.
From 16th March 1918 to 18th May 1918 the first two batches of D IIIs were issued to Jagdeschwadern II and III. They were soon returned to the factory for modification and many were later reissued to the Kest (Kampfeinsitzer Staffeln), for Home Defence from 22nd July 1918 to 6th September 1918.
Allocation of D IVs, where known (date of issue, where known, also shown):
Jasta 14—3027/18 (23rd Aug. 1918), 3030–3031/18 (23rd Aug. 1918), 3033/18, 3047/18, 3050/18, 3052/18, 6150/18, 6154/18, 6166/18 (28th Oct. 1918), 6172–6174/18 (5th Nov. 1918).
Jasta 22—3035/18 (30th Aug. 1918), 3055/18, 3064–3065/18, 3069–3070/18, 3074/18, 3078/18, 3081/18 (9th Oct. 1918).
Jagd. II—(Jastas 12, 13, 15 and 19, individual allocation not indicated). 3036/18 (25th Oct. 1918), 3063/18, 3077/18 (17th Oct. 1918), 3082–3083/18, 6151/18 (2nd Nov. 1918), 6152/18 (25th Oct. 1918), 6158–6160/18 (31st Oct. 1918), 6161/18 (2nd Nov. 1918), 6163/18 (4th Nov. 1918), 6164/18 (2nd Nov. 1918), 6165/18 (31st Oct. 1918), 6167/18 (31st Oct. 1918), 6168/18 (4th Nov. 1918), 6170/18 (2nd Nov. 1918).
Z.A.K. 5—3080/18 (16th Oct. 1918), 6162/18 (8th Nov. 1918).
Marine Landfeld Jastas—3034/18, 3048/18, 3051/18, 3053–3054/18, 3056/18, 3062/18, 3072/18.
Marine Landflieger Abt.—3036/18, 3088/18.
Flieger Abt. 431—3087/18, 6178/18.

SPECIFICATION

Manufacturer: Siemens-Schuckert Werke G.m.b.H., Siemenstaadt, Berlin and Nürnberg.

Powerplant: 160-h.p. Siemens Halske Sh III and 200-h.p. Sh IIIa. (Some of the later Sh IIIa engines developed as much as 240 h.p.).

Dimensions: D III—Span 8·43 m. (27 ft. 7⅞ in.). Length 5·7 m. (18 ft. 8½ in.). Height 2·8 m. (9 ft. 2¼ in.). Area 18·82 sq. m. (203·5 sq. ft.). D IV—Span 8·35 m. (27 ft. 4¾ in.). Length 5·7 m. (18 ft. 8½ in.). Height 2·72 m. (8 ft. 11 in.). Area 15·12 sq. m. (163·25 sq. ft.).

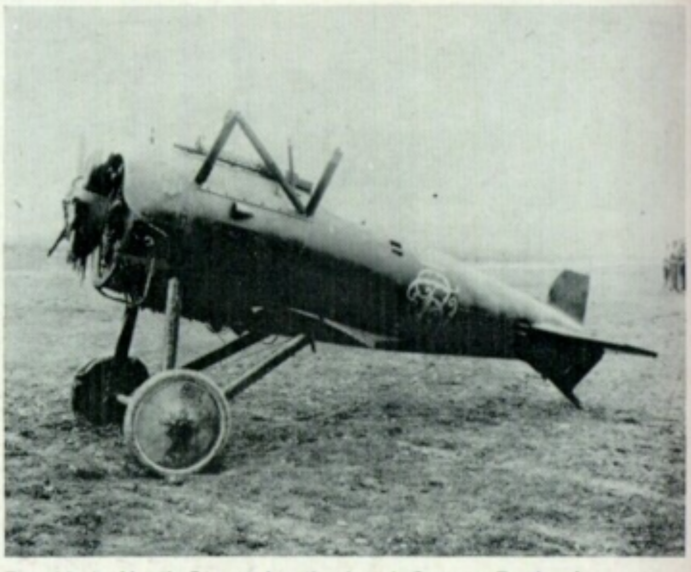
Weights: D III—Empty 534 k.g. (1,175 lb.). Loaded 725 k.g. (1,595 lb.). D IV—Empty 540 k.g. (1,190 lb.). Loaded 735 k.g. (1,620 lb.).

Performance: D III—Maximum speed c.a. 180 km. hr. (112·5 m.p.h.). Climb 1,000 m. (3,280 ft.) in 1·75 min. 2,000 m. (6,560 ft.) in 3·75 min. 3,000 m. (9,840 ft.) in 6 min. 4,000 m. (13,120 ft.) in 9 min. 5,000 m. (16,400 ft.) in 13 min. 6,000 m. (19,680 ft.) in 20 min. *N.B.* In September 1918 at Adlershof a D III fitted with a Rhemag-built Sh IIIa climbed 8,100 m. (26,575 ft.) in 36 min. D IV—Maximum speed c.a. 190 km. hr. (118·75 m.p.h.). Climb 1,000 m. in 1·9 min. 2,000 m. in 3·7 min. 3,000 m. in 6·4 min. 4,000 m. in 9·1 min. 5,000 m. in 12·1 min. 6,000 m. in 15·5 min. Ceiling approx. 8,000 m. (26,240 ft.), both types.

Duration: Approximately 2 hours.

Armament: Twin synchronised Spandau machine guns.

Fuselage of S.S.W. D III D 8356/17, *of* Kest 5, *which landed in Switzerland. Elaborate monogram surmounted by crown to be noted—unfortunately not identified.*
(Photo: P. M. Grosz via Alex Imrie)



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